



# Product Change Notification



Product Group: DIODES / January 14th, 2015 / PCN-DD-003-2015 Rev.0

## Back-end assembly location change and 6 inches wafer qualification for DO-214AC (SMA) Schottky Products

**DESCRIPTION OF CHANGE:** Vishay Diodes Division would like to announce the transfer of the subcontractor manufactured DO-214AC (SMA) Schottky products to Vishay in house factory in Tianjin China.  
 Package Outline Dimension will be slightly different but still meeting JEDEC specification tolerances.  
 Details of changes of device marking, label and packaging are shown from page 3 to 5.  
 Together with the back-end assembly location and structure changes the Silicon Wafer diameter used as raw material will change from 5 inches (125 mm) to 6 inches (150 mm).  
 Taking the chance of the subjected changes to be implemented in this PCN, Vishay Diodes will also launch the halogen free version materials with the -M3 code and also the its AEC Q-101 qualified corresponding material with HM3 code.

**CLASSIFICATION OF CHANGE:** Assembly site  
 Assembly Process/Structure  
 Labelling/Packing  
 Wafer/Chip/Pellet Site-Layout/Design

**REASON FOR CHANGE:** Assembly, Wafer process and manufacturing capacity consolidation

**EXPECTED INFLUENCE ON QUALITY/RELIABILITY/PERFORMANCE:** There will be no effect on quality, reliability, or electrical performance.

**PRODUCT CATEGORY:** Diodes, Schottky

### PART NUMBERS/SERIES/FAMILIES AFFECTED:

PACKAGE	PRODUCT	HALOGEN FREE VERSION	PRODUCT AEC Q101
SMA	VS-10MQ040NTRPBF	VS-10MQ040-M3/5AT	VS-10MQ040HM3/5AT
SMA	VS-10MQ060NTRPBF	VS-10MQ060-M3/5AT	VS-10MQ060HM3/5AT
SMA	VS-10MQ100NTRPBF	VS-10MQ100-M3/5AT	VS-10MQ100HM3/5AT
SMA	VS-15MQ040NTRPBF	VS-15MQ040-M3/5AT	VS-15MQ040HM3/5AT
SMA	VS-20MQ040NTRPBF	VS-20MQ040-M3/5AT	VS-20MQ040HM3/5AT
SMA	VS-20MQ060NTRPBF	VS-20MQ060-M3/5AT	VS-20MQ060HM3/5AT
SMA	VS-20MQ100NTRPBF	VS-20MQ100-M3/5AT	VS-20MQ100HM3/5AT
SMA		VS-30MQ040-M3/5AT	VS-30MQ040HM3/5AT
SMA	VS-95-9988PBF		
SMA	VS-MBRA140TRPBF	VS-MBRA140-M3/5AT	VS-10MQ040HM3/5AT

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*Additional part numbers released in DO-214AC (SMA) package after the effective date of this PCN will be covered by this announcement.*

**VISHAY BRAND(s):** Vishay Semiconductors

**TIME SCHEDULE:** Effective from **March 16<sup>th</sup>, 2015** Vishay will start to implement the above changes on new production

**SAMPLE AVAILABILITY:** On customer request

**PRODUCT IDENTIFICATION:** N/A

**QUALIFICATION DATA:** Qualification data is presented on page 6 of this PCN

**This PCN is considered approved, without further notification, unless we receive specific customer concerns before March 16<sup>th</sup>, 2015 or as specified by contract.**

**ISSUED BY:**

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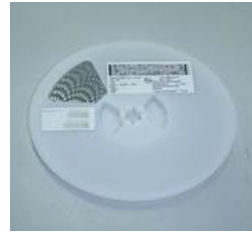
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# Packaging

Current

New



Label

Current (Combined 2D+1D)



New (Separated 2D and 1D)



Device marking

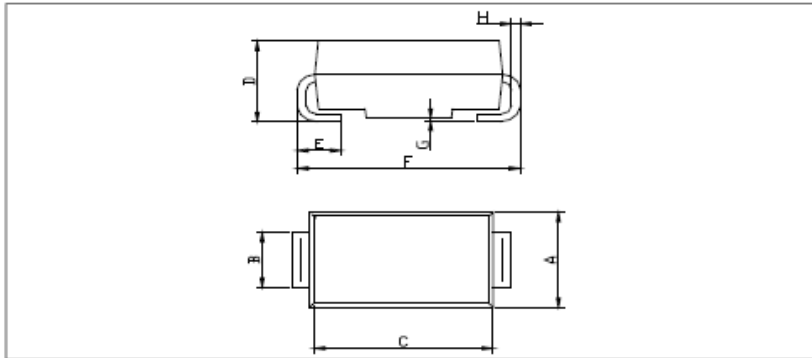
Current



New



### Package Outline Dimension



SMA	Unit:mm	A	B	C	D	E	F
New	Spec	2.54~2.79	1.24~1.65	3.99~4.50	1.98~2.29	0.76~1.52	4.93~5.28
	Typical value	2.63	1.57	4.28	2.09	1.06	5.12
Current	Spec	2.55~2.65	1.46~1.54	4.15~4.25	1.97~2.03	0.87~1.13	4.98~5.18
	Typical value	2.6	1.5	4.2	2	1	5.08

## Reliability results

### SMA package

STRESS	CONDITIONS	TEST POINTS	SAMPLES	FAIL
HTRB	Tjmax @100% rated voltage 1000hrs	0 168 500 1000	4 x 77	0/308
TC	-55°C/150°C 1000 cycles	0 250 500 1000	4 x 77	0/308
UHAST	130°C 85%RH 96hrs	0 48 96	4 x 77	0/308
H3TRB	85°C 85%HR @80% Vr 1000hrs	0 168 500 1000	4 x 77	0/308
IOL	DT=100°C 1000Hrs	0 500 1000	4 x 77	0/308
D.P.A	AEC-Q101-004	n/a	2	Passed
Phys. Dimension	JESD22 B-100	n/a	30	0/30
RSH	JESD22 B-106	Before & After	30	0/30
Solderability	JESD22 B-102	Before & After	10	0/10